

Revised forms for the submission of the Confidence-Building Measures

Declaration form on Nothing to Declare or Nothing New to Declare for use in the information exchange

Measure	Nothing to declare	Nothing new to declare	Year of last declaration if nothing new to declare
A, part 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A, part 2 (i)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A, part 2 (ii)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A, part 2 (iii)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(Please mark the appropriate box(es) for each measure with a tick, and fill in the year of last declaration in the last column where applicable.)

Date: March 31, 2016 _____

State Party to the Convention: Finland _____

Date of ratification/accession to the Convention: February 4, 1974 _____

National point of contact: Mikael Långström / MFA _____

Confidence-Building Measure "A"

Form A, part 1 (i)

No maximum containment laboratory exists in Finland.

Form A, part 1 (ii)

If no BSL4 facility is declared in Form A, part 1 (i), indicate the highest biosafety level implemented in facilities handling biological agents¹ on a State Party's territory:

Biosafety level 3 ²	<input type="checkbox"/> yes / no
Biosafety level 2 ³ (if applicable)	yes / no

Any additional relevant information as appropriate:

Additional information specific to each laboratory working with biological agents at BSL2/BSL3 level follows from these organisations: Centre for Biothreat Preparedness, National Institute of Health and Welfare (THL), University of Helsinki; *i*) Yersinia Research Laboratory, *ii*) Department of Virology, *iii*) Department of Food and Environmental Sciences, *iv*) *Clostridium botulinum* laboratory, Finnish Food Safety Authority (Evira) and Finnish Defence Research Agency (FDRA).

¹ Microorganisms pathogenic to humans and/or animals

² In accordance with the latest edition of the WHO Laboratory Biosafety Manual and/or the OIE Terrestrial Manual or other equivalent internationally accepted guidelines.

³ In accordance with the latest edition of the WHO Laboratory Biosafety Manual and/or the OIE Terrestrial Manual or other equivalent internationally accepted guidelines.

Exchange of Data on Research Centres and Laboratories #1

1. Name(s) of the Facility

Centre for Biothreat Preparedness

2. Responsible public or private organization or company

Centre for Military Medicine, Finnish Defence Forces under the Ministry of Defence and the National Institute for Health and Welfare (THL) under Ministry of Social Affairs and Health.

3. Location and postal address

Tukholmankatu 8 A, FI-00290 Helsinki and Mannerheimintie 166, FI-00300 Helsinki.

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

The Centre is financed jointly by the Finnish Defence Forces and National Institute for Health and Welfare (THL).

5. Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m²)

There are no BSL-4 units at the Centre.

6. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

The Centre for Biothreat Preparedness started its activities in 2005. During 2015, the Centre developed rapid detection assays for selected microbial agents.

If no BSL4 facility is declared in Form A, part 1 (i), indicate the highest biosafety level implemented in facilities handling biological agents⁴ on a State Party's territory:

Biosafety level 3	yes
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⁴ Microorganisms pathogenic to humans and/or animals

Exchange of Data on Research Centres and Laboratories #2

1. Name(s) of the Facility

National Institute for Health and Welfare (THL), bacteriological and virological laboratories.

2. Responsible public or private organization or company

National Institute for Health and Welfare (THL) under Ministry of Social Affairs and Health.

3. Location and postal address

Mannerheimintie 166, FI-00300 Helsinki

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

Funding from the Ministry of Social Affairs and Health and large variety of external research funding.

5. Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m²)

There are no BSL-4 laboratories or other units at this containment level.

6. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

Clinical and environmental microbiological research and reference laboratory facilities in Helsinki, Turku, Kuopio and Oulu. Working mainly with ordinary occurring endemic and epidemic bacteria and viruses with main emphases on vaccine preventable diseases, enteric pathogens, zoonoses, *tuberculosis spp*, polioviruses, influenza (including 2009 pandemic influenza H1N1), coronaviruses, HIV, hepatitis viruses and environmental fungi and bacteria causing human health problems. The Institute manages regional influenza and polio laboratory facilities. The Institute is in charge of biothreat preparedness in public health context. National focal point for IHR started June 2007.

If no BSL4 facility is declared in Form A, part 1 (i), indicate the highest biosafety level implemented in facilities handling biological agents⁵ on a State Party's territory:

Biosafety level 3	yes
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Any additional relevant information as appropriate:

Two BSL-3 level laboratories: 120m² in Helsinki and 80m² in Turku.

⁵ Microorganisms pathogenic to humans and/or animals

Exchange of Data on Research Centres and Laboratories #3

1. Name(s) of the Facility

Yersinia Research Laboratory

2. Responsible public or private organization or company

University of Helsinki

3. Location and postal address

Department of Bacteriology and Immunology
Medicum, University of Helsinki
Haartmaninkatu 3
P.O Box 21
FI-00014 University of Helsinki
Helsinki, Finland

Yersinia-research home page: <http://www.helsinki.fi/yersinia/>

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

Special state subsidy (EVO) for health science research in Finland, Centre for Military Medicine, Academy of Finland.

5. Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m2)

No BSL-4 laboratories.

6. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

The research is focused on genetics and biosynthesis of lipopolysaccharide (LPS) of genus *Yersinia* including *Yersinia pestis*, as well as on the role of LPS in virulence. Molecular evolution studies elucidate the relationships between the species of the genus *Yersinia*. Research work is also conducted on the molecular biology and potential therapeutic use of bacteriophages.

If no BSL4 facility is declared in Form A, part 1 (i), indicate the highest biosafety level implemented in facilities handling biological agents⁶ on a State Party's territory:

Biosafety level 3	no
Biosafety level 2 (if applicable)	yes

⁶ Microorganisms pathogenic to humans and/or animals

Exchange of Data on Research Centres and Laboratories #4:

1. Name(s) of the research centre and/or laboratory

Department of Virology

2. Responsible public or private organization or company

University of Helsinki

3. Location and postal address

Department of Virology
Medicum, P.O. Box 21
00014 University of Helsinki

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

In 2015 our research group received major funding from Helsinki University Hospital Funds (EVO), University of Helsinki, Academy of Finland, Sigrid Jusélius Foundation and EU-IMI ("EbolaMoDRAD" project).

5. Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m²)

There are no BSL-4 laboratories.

6. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

The Helsinki University Viral Zoonoses Group (HUVZG) conducts research on virology, cell biology, ecology and epidemiology of zoonotic viruses, especially hantaviruses and certain other rodent-borne and arboviruses occurring in Northern Europe. Typical viruses that we are growing are Puumala virus, tick-borne encephalitis virus, dengue and Zika viruses. The research group operates within the Faculty of Medicine, Department of Virology, and partially the Department of Veterinary Biosciences at the Veterinary Faculty. There is a BSL-3 facility in both faculties. The Viral Zoonoses group is connected to the diagnostic laboratory of viral zoonoses at HUSLAB, Helsinki. The group is led by Olli Vapalahti, other principal investigators are Alexander Plyusnin, and professor Emeritus Antti Vaheri.

If no BSL4 facility is declared in Form A, part 1 (i), indicate the highest biosafety level implemented in facilities handling biological agents⁷ on a State Party's territory:

Biosafety level 3	yes
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⁷ Microorganisms pathogenic to humans and/or animals

Exchange of Data on Research Centres and Laboratories #5

1. Name(s) of the research centre and/or laboratory

Department of Food and Environmental Sciences

2. Responsible public or private organization or company

University of Helsinki

3. Location and postal address

Department of Food and Environmental Sciences

P.O. Box 56 (Viikinkaari 9)

00014 University of Helsinki

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

The funding was received from EU FP7 via the “Integrated Chikungunya Research” consortium.

5. Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m²)

There are no BSL-4 laboratories.

6. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

The research group carries out alphavirus research at the Department of Food and Environmental Sciences, University of Helsinki. The research focuses on the alphavirus (Semliki Forest virus, Sindbis virus and Chikungunya virus) replication mechanisms and antiviral development. Small molecular-weight inhibitors are searched against Chikungunya virus. The Chikungunya virus research is conducted in the BSL-3 laboratory of the Veterinary Faculty in the Viikki campus.

If no BSL4 facility is declared in Form A, part 1 (i), indicate the highest biosafety level implemented in facilities handling biological agents⁸ on a State Party's territory:

Biosafety level 3	yes
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⁸ Microorganisms pathogenic to humans and/or animals

Exchange of Data on Research Centres and Laboratories #6

1. Name(s) of the Facility

Clostridium botulinum laboratory

2. Responsible public or private organization or company

University of Helsinki

3. Location and postal address

Department of Food Hygiene and Environmental Health

Faculty of Veterinary Medicine

Agnes Sjöbergin katu 2

P.O. Box 66

00014 University of Helsinki, Finland

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

The laboratory is financed by the University of Helsinki. External research funding is received from various sources, including the Academy of Finland, the Finnish Foundation for Veterinary Research, the Finnish Ministry of Agriculture and Forestry, and the Walter Ehrström Foundation. During 2015, the laboratory participated in the EU FP7 collaboration 'AntiBotABE' (2010-2015). The laboratory is currently participating in the ERA-Net anihwa collaboration 'AniBotNet' and the EU Marie Skłodowska Curie Innovative Training Networks (ITN) collaboration 'CLOSPORE'.

5. Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m2)

No BSL-4 laboratories.

6. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

Scientific research on the prevalence, epidemiology, genetic heterogeneity, and metabolism in *Clostridium botulinum*. Diagnostic services for confirmation of suspected human botulism outbreaks and food safety testing.

If no BSL4 facility is declared in Form A, part 1 (i), indicate the highest biosafety level implemented in facilities handling biological agents⁹ on a State Party's territory:

Biosafety level 3	no
Biosafety level 2 (if applicable)	yes

⁹ Microorganisms pathogenic to humans and/or animals

Exchange of Data on Research Centres and Laboratories #7

1. Name(s) of the Facility

Finnish Food Safety Authority (Evira)

2. Responsible public or private organization or company

Finnish Food Safety Authority under the Ministry of Agriculture and Forestry

3. Location and postal address

Mustialankatu 3
FI-00790 Helsinki

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

Financing from the Ministry of Agriculture and Forestry

5. Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m2)

None

6. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

Diagnostics, surveillance and reference laboratory activities of animal diseases, zoonotic agents and foodborne pathogens, for example rabies, avian influenza, swine influenza (including pandemic H1N1 in pigs), Newcastle disease, foot and mouth disease, classical swine fever, anthrax, tuberculosis, verotoxic *E. coli*.

If no BSL4 facility is declared in Form A, part 1 (i), indicate the highest biosafety level implemented in facilities handling biological agents¹⁰ on a State Party's territory:

Biosafety level 3	yes
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¹⁰ Microorganisms pathogenic to humans and/or animals

Exchange of Data on Research Centres and Laboratories #8

1. Name(s) of the Facility

Finnish Defence Research Agency (FDRA)

2. Responsible public or private organization or company

Finnish Defence Research Agency (FDRA), Finnish Defence Forces under the Ministry of Defence.

3. Location and postal address

P.O. Box 5 (Paroistentie 20)
FI-34111 Lakiala
Finland

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

Finnish Defence Forces

5. Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m2)

No BSL-4 laboratories.

6. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

The objective of the research work has been in the development of detection and identification methods for biological warfare agents; microbes and toxins. A deployable CBRN field laboratory participated in international military exercises. The BSL-3 level CBRN field laboratory was operated as BSL-2 containment facility during 2015.

If no BSL4 facility is declared in Form A, part 1 (i), indicate the highest biosafety level implemented in facilities handling biological agents¹¹ on a State Party's territory:

Biosafety level 3	yes
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¹¹ Microorganisms pathogenic to humans and/or animals

Part 2 Exchange of information on national biological defence research and development programmes

Form A, part 2 (i)

National biological defence research and development programmes Declaration

Are there any national programmes to conduct biological defence research and development within the territory of the State Party, under its jurisdiction or control anywhere? Activities of such programmes would include prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

yes / no

If the answer is Yes, complete Form A, part 2 (ii) which will provide a description of each programme.

Form A, part 2 (ii, iii)

National biological defence research and development programmes

The Finnish Strategy to Secure Vital Functions of Society (2003 and 2006), as well as The Security Strategy for Society (2010) have defined vital functions of Finnish society and established targets and development policies that guide each administrative branch of the government in dealing with its strategic tasks. These strategies called for co-operation between each government sector in combating against new threats towards society. According to the Government Reports on Finnish Security and Defence Policy of 2004, 2009 and 2012, terrorism and epidemics caused by infectious diseases were listed as key threats affecting national security.

Based on the above resolutions, The Centre for Biothreat Preparedness started operations in Helsinki in May 2005. The Centre combines Finnish scientific and laboratory knowhow on biological defence, as well as on biothreat assessment and preparedness. The Centre has actively sought domestic and international collaboration, especially in the field of rapid detection and identification methodologies of selected biological agents. The Centre is composed of two units: the Biological Defence Sector of the Finnish Defence Forces, and the Department of Infectious Diseases at the National Institute of Health and Welfare (THL). Scientific work is carried out at a biological safety level 3 laboratory at the THL facilities. In addition, the Centre functions within the Biomedicum Helsinki Institute, where work is carried out in close contact with the Research and Development Department of the Centre for Military Medicine.

Confidence-Building Measure "B"

Exchange of information on outbreaks of infectious diseases and similar occurrences caused by toxins

Form B

Information on outbreaks of infectious diseases and similar occurrences, that seem to deviate from the normal pattern¹²

No unusual human or animal disease outbreaks were detected.

¹² See paragraph 2 of the chapeau to Confidence-Building Measure B.

Confidence-Building Measure "C"

Encouragement of publication of results and promotion of use of knowledge

Beczala A, Ovchinnikova OG, Datta N, Mattinen L, Knapska K, Radziejewska-Lebrecht J, Holst O, Skurnik M. Structure and genetic basis of *Yersinia similis* serotype O:9 O-specific polysaccharide. *Innate Immun.* 2015 Jan;21:3-16. doi: 10.1177/1753425913514783.

Bozcal E, Uzel A, Aydemir S, Skurnik M. Isolation of pathogenic *Yersinia enterocolitica* strains from waste water and pig farm in Izmir region, Turkey. *Folia Microbiol.* 2015 Nov;60:523-9. doi: 10.1007/s12223-015-0394-y.

Dahlsten E, Lindström M, Korkeala H. Mechanisms of food processing and storage-related stress tolerance in *Clostridium botulinum*. *Res Microbiol.* 2015 May;166:344-52. doi: 10.1016/j.resmic.2014.09.011.

Derman Y, Söderholm H, Lindström M, Korkeala H. Role of *csp* genes in NaCl, pH, and ethanol stress response and motility in *Clostridium botulinum* ATCC 3502. *Food Microbiol.* 2015 Apr;46:463-70. doi: 10.1016/j.fm.2014.09.004.

Goeijenbier M, Meijers JC, Anfasa F, Roose JM, van de Weg CA, Bakhtiari K, Henttonen H, Vaheri A, Osterhaus AD, van Gorp EC, Martina BE. Effect of Puumala hantavirus infection on human umbilical vein endothelial cell hemostatic function: platelet interactions, increased tissue factor expression and fibrinolysis regulator release. *Front Microbiol.* 2015 Mar;6:220. doi: 10.3389/fmicb.2015.00220.

Hepojoki S, Hepojoki J, Hedman K, Vapalahti O, Vaheri A. Rapid homogeneous immunoassay based on time-resolved Förster resonance energy transfer for serodiagnosis of acute hantavirus infection. *J Clin Microbiol.* 2015 Feb;53:636-40. doi: 10.1128/JCM.02994-14.

Hepojoki S, Rusanen J, Hepojoki J, Nurmi V, Vaheri A, Lundkvist Å, Hedman K, Vapalahti O. Competitive Homogeneous Immunoassay for Rapid Serodiagnosis of Hantavirus Disease. *J Clin Microbiol.* 2015 Jul;53:2292-7. doi: 10.1128/JCM.00663-15.

Jakava-Viljanen M, Nokireki T, Sironen T, Vapalahti O, Sihvonen L, Huovilainen A. Evolutionary trends of European bat lyssavirus type 2 including genetic characterization of Finnish strains of human and bat origin 24 years apart. *Arch Virol.* 2015 Jun;160:1489-98. doi: 10.1007/s00705-015-2424-0.

Jääskeläinen AJ, Moilanen K, Aaltonen K, Putkuri N, Sironen T, Kallio-Kokko H, Vapalahti O. Development and evaluation of a real-time EBOV-L-RT-qPCR for detection of Zaire ebolavirus. *J Clin Virol.* 2015 Jun;67:56-8. doi: 10.1016/j.jcv.2015.04.003.

Kallio ER, Helle H, Koskela E, Mappes T, Vapalahti O. Age-related effects of chronic hantavirus infection on female host fecundity. *J Anim Ecol.* 2015 Sep;84:1264-72. doi: 10.1111/1365-2656.12387.

Kasperkiewicz K, Swierzko AS, Bartłomiejczyk MA, Cedzynski M, Noszczyńska M, Duda KA, Michalski M, Skurnik M. 2015. Interaction of human mannose-binding lectin (MBL) with *Yersinia enterocolitica* lipopolysaccharide. *Int J Med Microbiol.* 2015 Sep;305:544-52. doi: 10.1016/j.ijmm.2015.07.001.

- Kinnunen PM, Holopainen JM, Hemmilä H, Piiparinen H, Sironen T, Kivelä T, Virtanen J, Niemimaa J, Nikkari S, Järvinen A, Vapalahti O. Severe Ocular Cowpox in a Human, Finland. *Emerg Infect Dis*. 2015 Dec;21:2261-3. doi: 10.3201/eid2112.150621.PMID: 26583527
- Koskela KA, Mattinen L, Kalin-Mänttari L, Vergnaud G, Gorgé O, Nikkari S, Skurnik M. Generation of a CRISPR database for *Yersinia pseudotuberculosis* complex and role of CRISPR-based immunity in conjugation. *Environ Microbiol*. 2015 Nov;17:4306-21. doi: 10.1111/1462-2920.12816.
- Laine O, Leppänen I, Koskela S, Antonen J, Mäkelä S, Sinisalo M, Vaheri A, Mustonen J. Severe Puumala virus infection in a patient with a lymphoproliferative disease treated with ibrutinib. *Infect Dis (Lond)*. 2015 Feb;47:107-11. doi: 10.3109/00365548.2014.969304.
- Leskinen K, Varjosalo M, Li Z, Li CM, Skurnik M. The expression of the *Yersinia enterocolitica* O:3 lipopolysaccharide O-antigen and outer core gene clusters is RfaH-dependent. *Microbiology*. 2015 Jun;161:1282-94. doi: 10.1099/mic.0.000076
- Leskinen K, Varjosalo M, Skurnik M. Absence of YbeY RNase compromises the growth and enhances the virulence plasmid gene expression of *Yersinia enterocolitica* O:3. *Microbiology*. 2015 Feb;161:285-99. doi: 10.1099/mic.0.083097-0
- Levanov L, Jääskeläinen A, Vapalahti O. Test based on subtype-specific μ -capture IgM immunoassay can distinguish between infections of European and Siberian subtypes of tick-borne encephalitis virus. *J Clin Virol*. 2015 Dec;73:81-3. doi: 10.1016/j.jcv.2015.11.004.
- Ling J, Vaheri A, Hepojoki S, Levanov L, Jääskeläinen A, Henttonen H, Vapalahti O, Sironen T, Hepojoki J. Serological survey of Seewis virus antibodies in patients suspected for hantavirus infection in Finland; a cross-reaction between Puumala virus antiserum with Seewis virus N protein? *J Gen Virol*. 2015 Jul;96:1664-75. doi: 10.1099/vir.0.000127.
- Miethe S, Rasetti-Escargueil C, Avril A, Liu Y, Chahboun S, Korkeala H, Mazuet C, Popoff MR, Pelat T, Thullier P, Sesardic D, Hust M. Development of Human-Like scFv-Fc Neutralizing Botulinum Neurotoxin E. *PLoS One*. 2015 Oct 6;10:e0139905. doi: 10.1371/journal.pone.0139905.
- Muszer M, Noszczyńska M, Kasperkiewicz K, Skurnik M. Human Microbiome: When a Friend Becomes an Enemy. *Arch Immunol Ther Exp*. 2015 Aug;63:287-98. doi: 10.1007/s00005-015-0332-3.
- Mölsä M, Hemmilä H, Katz A, Niemimaa J, Forbes KM, Huitu O, Stuart P, Henttonen H, Nikkari S. Monitoring biothreat agents (*Francisella tularensis*, *Bacillus anthracis* and *Yersinia pestis*) with a portable real-time PCR instrument. *J Microbiol Methods*. 2015 Aug;115:89-93. doi: 10.1016/j.mimet.2015.05.026.
- Noszczyńska M, Kasperkiewicz K, Duda KA, Podhorodecka J, Rabsztyń K, Gwizdala K, Swierżko AS, Radziejewska-Lebrecht J, Holst O, Skurnik M. Serological characterization of the enterobacterial common antigen substitution of the lipopolysaccharide of *Yersinia enterocolitica* O:3. *Microbiology* 2015 Jan;161:219-27. doi: 10.1099/mic.0.083493-0.
- Pirnay JP, Blasdel BG, Bretaudeau L, Buckling A, Chanishvili N, Clark JR, Corte-Real S, Debarbieux L, Dublanquet A, De Vos D, Gabard J, Garcia M, Goderdzishvili M, Gorski A, Hardcastle J, Huys I, Kutter E, Lavigne R, Merabishvili M, Olchawa E, Parikka KJ, Patey O, Pouillot F, Resch G, Rohde C, Scheres J, Skurnik M, Vaneechoutte M, Van Parys L,

Verbeke G, Zizi M, Van den Eede G. Quality and Safety Requirements for Sustainable Phage Therapy Products. *Pharma Res.* 2015 Jul;32:2173–9. doi: 10.1007/s11095-014-1617-7.

Reusken C, Niedrig M, Pas S, Anda P, Baize S, Charrel R, Di Caro A, Drosten C, Fernandez-Garcia MD, Franco L, Gunther S, Leparac-Goffart I, Martina B, Pannetier D, Papa A, Sanchez-Seco MP, Vapalahti O, Koopmans M. Identification of essential outstanding questions for an adequate European laboratory response to Ebolavirus Zaire West Africa 2014. *J Clin Virol.* 2015 Jan;62:124-34.

Rossov H, Ollgren J, Hytonen J, Rissanen H, Huitu O, Henttonen H, Kuusi M, Vapalahti O. Incidence and seroprevalence of tularaemia in Finland, 1995 to 2013: regional epidemics with cyclic pattern. *Euro Surveill.* 2015 Aug;20:20:21209.

Salem M, Virtanen S, Korkeala H, Skurnik M. Isolation and characterization of *Yersinia*-specific bacteriophages from pig stools in Finland. *J Appl Microbiol.* 2015 Mar;118:599-608. doi: 10.1111/jam.12722

Sissonen S, Rossov H, Karlsson E, Hemmälä H, Henttonen H, Isomursu M, Kinnunen PM, Pelkola K, Pelkonen S, Tarkka E, Myrtenäs K, Nikkari S, Forsman M. Phylogeography of *Francisella tularensis* subspecies *holarctica* in Finland, 1993-2011. *Infect Dis (Lond).* 2015;47:701-6. doi: 10.3109/23744235.2015.1049657.

Strandin T, Hepojoki J, Laine O, Mäkelä S, Klingström J, Lundkvist Å, Julkunen I, Mustonen J, Vaheri A. Interferons Induce STAT1-Dependent Expression of Tissue Plasminogen Activator, a Pathogenicity Factor in Puumala Hantavirus Disease. *J Infect Dis.* 2015 Dec 23. pii: jiv764.

Söderholm H, Derman Y, Lindström M, Korkeala H. Functional *csdA* is needed for effective adaptation and initiation of growth of *Clostridium botulinum* ATCC 3502 at suboptimal temperature. *Int J Food Microbiol.* 2015 Sep;208:51-7. doi: 10.1016/j.ijfoodmicro.2015.05.013.

Tervo L, Mäkelä S, Syrjänen J, Huttunen R, Rimpelä A, Huhtala H, Vapalahti O, Vaheri A, Mustonen J. Smoking is associated with aggravated kidney injury in Puumala hantavirus-induced haemorrhagic fever with renal syndrome. *Nephrol Dial Transplant.* 2015 Oct;30:1693-8. doi: 10.1093/ndt/gfv273.

Van Cuong N, Carrique-Mas J, Vo Be H, An NN, Tue NT, Anh NL, Anh PH, Phuc NT, Baker S, Voutilainen L, Jääskeläinen A, Huhtamo E, Utriainen M, Sironen T, Vaheri A, Henttonen H, Vapalahti O, Chaval Y, Morand S, Bryant JE. Rodents and risk in the Mekong Delta of Vietnam: seroprevalence of selected zoonotic viruses in rodents and humans. *Vector Borne Zoonotic Dis.* 2015 Jan;15:65-72. doi: 10.1089/vbz.2014.1603.

Yang K, Gyu Park C, Cheong C, Bulgheresi S, Zhang S, Zhang P, He Y, Jiang L, Huang H, Ding H, Wu Y, Wang S, Zhang L, Li A, Xia L, Bartra SS, Plano GV, Skurnik M, Klena JD, Chen T. Host Langerin (CD207) is a receptor for *Yersinia pestis* phagocytosis and promotes dissemination. *Immunol Cell Biol.* 2015 Oct;93:815-24. doi: 10.1038/icb.2015.46

Zeimes CB, Quoilin S, Henttonen H, Lyytikäinen O, Vapalahti O, Reynes JM, Reusken C, Swart AN, Vainio K, Hjertqvist M, Vanwambeke SO. Landscape and regional environmental analysis of the spatial distribution of hantavirus human cases in Europe. *Front Public Health.* 2015 Mar;3:54. doi: 10.3389/fpubh.2015.00054.

Confidence-Building Measure "E"

Form E

Declaration of legislation, regulations and other measures

Relating to	Legislation	Regulations	Other measures ¹³	Amended since last year
(a) Development, production stockpiling, acquisition or retention of microbial or other biological agents, or toxins, weapons, equipment and means of delivery specified in Article I	<input type="checkbox"/> Yes/ <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes/ <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes/ <input checked="" type="checkbox"/> No	Yes/ <input checked="" type="checkbox"/> No
(b) Exports of micro-organisms ¹⁴ and toxins	<input type="checkbox"/> Yes/ <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes/ <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes/ <input checked="" type="checkbox"/> No	Yes/ <input checked="" type="checkbox"/> No
(c) Imports of micro-organisms ¹¹ and toxins	<input type="checkbox"/> Yes/ <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes/ <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes/ <input checked="" type="checkbox"/> No	Yes/ <input checked="" type="checkbox"/> No
(d) Biosafety ¹⁵ and biosecurity ¹⁶	<input type="checkbox"/> Yes/ <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes/ <input checked="" type="checkbox"/> No	Yes/ <input checked="" type="checkbox"/> No	Yes/ <input checked="" type="checkbox"/> No

Additional information to form E

Finland's legislation on biological weapons is based on the Biological Weapons Act 257/1975 and Decree 258/1975. Corresponding penal provisions were included in the Penal Code, chapter 11, section 7 b (Breach of the prohibition of biological weapons), with amendment 17/2003. Penal Code (39/1889) chapter 11, section 1 (War Crime), chapter 5, section 3 (Complicity in an offence) and section 6 (Abetting), chapter 34, sections 4 (Health endangerment) and 5 (Aggravated health endangerment), and chapter 34 a (Terrorist offences) are also applicable.

¹³ Including guidelines.

¹⁴ Micro-organisms pathogenic to man, animals and plants in accordance with the Convention.

¹⁵ In accordance with the latest version of the WHO Laboratory Biosafety Manual or equivalent national or international guidance.

¹⁶ In accordance with the latest version of the WHO Laboratory Biosecurity Guidance or equivalent national or international guidance.

Exports of micro-organisms and toxins are regulated by the Act on the Control of Export of Dual-Use Goods (562/1996, as amended by Acts 891/2000, 884/2001 and 581/2003), Government Decree on the Control of Export of Dual-Use Goods (924/2000 as amended by Decree 924/2000) and EC Council Regulation 1334/2000. Corresponding penal provisions were incorporated in the Penal Code (39/1889), chapter 46, sections 1-3 by Acts 769/1990, 1522/1994 and 706/1997. Since 2003, the authority responsible for export controls of micro-organisms and toxins is the Ministry for Foreign Affairs (Export Control Unit).

Exports of biological toxic agents "adapted for use in war" and related equipment, components and materials as listed in the EU Common Military List are regulated by the Act on the Export of Defence Materiel (282/2012). The authority responsible for export controls of the above mentioned biological toxic agents and related equipment, component and materials is the Ministry of Defence.

Imports of micro-organisms and toxins are regulated by the Biological Weapons Act 257/1975 and Decree 258/1975. Transports of micro-organisms and toxins are also regulated by the EC Council Directives 94/55/EEC and 96/49/EEC, the Communicable Diseases Act 583/1986 (as amended), section 33; Communicable Diseases Decree 786/1986 (as amended); Act on the Transport of Dangerous Goods (719/1994 as amended) and related decrees, Act on Protecting Plant Health (702/2003), section 7, and related decrees, Act on Animal Diseases (55/1980 as amended) and related decrees, Act on Veterinary Border Control (1192/1996 as amended) and related decrees. The corresponding penal provisions are included in the Penal Code (39/1889 as amended), chapter 44, section 2 (Health protection violation), chapter 44, section 13 (Transport of dangerous substances offence) and chapter 46, section 4 (Smuggling).

Biosafety is regulated by the Occupational Safety and Health Act (738/2002), as amended by the Government Decision for Protecting Employees from Work-related Threat Caused by Biological Agents (1155/1993), and Decision of the Ministry of Social Affairs and Health on the Classification of Biological Agents (921/2010). Furthermore, regulations concerning biosafety are included in the Communicable Diseases Act (583/1986) and Decree (786/1986), as well as Gene Technology Act (377/1995) and Government Decree on Gene Technology (928/2004). These biosafety regulations partly overlap with biosecurity; no specific biosecurity legislation exists.

Confidence-Building Measure "F"

Form F

Declaration of past activities in offensive and/or defensive biological research and development programmes

Nothing to declare.

Confidence-Building Measure "G"

Form G

Declaration of vaccine production facilities

There are no vaccine production facilities in Finland.